## WATER BOARD 2017 SPRING TREATMENT SUMMARY FOR MAY 1 - MAY 8, 2017

Prepared by Water Board personnel, May 8, 2017.

During the time period of May 1, to May 8, 2017, the Water Board's contractor, TKT Consulting LLC (TKT), continued to perform 2017 Spring Treatment activities at Leviathan Mine. TKT continued siphoning AMD from Pond 1 to Pond 3 and neutralizing the AMD with the Rotating Cylinder Treatment System (RCTS). TKT discharged neutralized AMD to Leviathan Creek on May 1<sup>st</sup>, 3<sup>rd</sup>, 5<sup>th</sup>, and 7<sup>th</sup>. 2017 Spring Treatment discharge volumes can be seen in Table 1.

From May 1, to May 5, 2017, U.S. Forest Service (USFS) Road 31052 from U.S. Highway 395 to Leviathan Mine was mostly packed dirt with some small areas of minor rutting. Atlantic Richfield contractors continued performing some road grading activities during the week of May 1 – May 8, 2017. Precipitation on May 6 – May 7, 2017, caused USFS Road 31052 to become slightly soft and muddy. At all times the road remained passable with a four-wheel-drive vehicle. No damage to the roadbed occurred due to travel on the road during this time period. Water Board personnel have been in contact with USFS personnel to keep them apprised of road conditions.

Conditions onsite during this time period remained challenging. Morning temperatures were around freezing and warmed significantly during the day. Some areas of the site remained muddy but most areas were dry prior to the precipitation on May 6<sup>th</sup> and 7<sup>th</sup>, which deposited approximately three inches of snow onsite. Most of this snow had melted by May 8<sup>th</sup>. Patchy snow remains in some areas ranging in depth from several inches to approximately 1 foot. Onsite areas with good sun exposure have mostly melted. Pond 3 remained ice free, TKT continued to use multiple pumps to expedite the mixing process. Ponds 1, 2 North, and 2 South remained ice free. See photos 1-3.



Photo 1-TKT neutralizing AMD in Pond 3 with the RCTS



Photo 2 – Siphon from Pond 1 into overflow structure to Pond 3 and RCTS



Photo 3 – TKT preparing to discharge neutralized AMD from Pond 3 following snowfall on May 6<sup>th</sup>

Additional sample results for untreated pond water samples and discharge samples became available and have been added to Tables 2 and 3. TKT continued to collect untreated pond water samples and discharge samples as necessary; analytical results for these samples are still pending and will be added to Tables 2 and 3 when they become available.

The valve that allows AMD to enter Pond 1 remained open and TKT continued to siphon influent from Pond 1 directly to the RCTS for treatment. The stage of water contained in Pond 1, as measured by the USGS, can be seen on Figure 1. Additionally, Water Board personnel have continued on site monitoring of available freeboard in all of the upper ponds (Pond 1, 2 North, and 2 South). The Pond 2 South manual freeboard measurement can be seen in Table 4, and appears to better represent actual site conditions than the USGS measurement viewed online. On May 2, 2017 Water Board personnel escorted and assisted USGS personnel while performing routine maintenance activities at Leviathan Mine. It was discovered that the datalogger collecting stage readings for Pond 1 was reading in error. USGS personnel replaced the bottled nitrogen source used for measuring stage and purged the nitrogen lines. Following this maintenance, the stage reading collected by the USGS datalogger, and displayed online, became more consistent with field measurements. Water Board personnel have made edits to Figure 1 in an attempt to better show conditions onsite over the past few weeks. The maximum depth of pond water over the invert elevation of the overflow pipes from the upper ponds to Pond 3 was approximately \( \frac{\pi}{n} \), with the exception of Pond 1 in which the maximum depth of pond water over the invert elevation of the overflow pipe reached approximately 1"-1.5" while Pond 1 was isolated. It is important to understand that at all times overflows from Pond 1, Pond 2 South, and Pond 2 North have

been conveyed directly to Pond 3 for treatment by the RCTS. No untreated or partially treated AMD has been released to Leviathan Creek.

The elevation of water contained in Pond 1, as of May 8, 2017, is slightly above the overflow invert elevation. AMD that overflows from Pond 1 is conveyed directly to the RCTS for treatment as occurs with the current siphon lines. The elevation of water contained in Ponds 2 South is slightly above the overflow invert elevation, as of May 8, 2017. The elevation of water contained in Pond 2 North is immediately below the overflow elevation, as of May 8, 2017. Any overflow from Ponds 2 North and 2 South is conveyed directly to Pond 3. TKT closely monitors the pH at multiple points in Pond 3 and adjusts the RCTS lime dosage to account for any pond overflows that are conveyed into Pond 3 but are not conveyed directly to the RCTS. The combined flow of AMD from the Adit and Pit Underdrain (PUD) as of May 8, 2017 is approximately 117 gallons per minute which is a decrease of approximately 9 gallons per minute from the combined flow observed one week ago.

On April 27, 2017 Atlantic Richfield contractors discovered a small soil slump east of Pond 4. Further investigation by Water Board personnel found additional soil cracking along and below the access road to Pond 3. On May 1, 2017 a geotechnical engineer from AECOM, the Water Board's summer Pond Water Treatment contractor, visited the site. The geotechnical engineer's preliminary recommendations consist of dressing the slope to fill in depressions and cracks to prevent further intrusion of water into the slump as well as the placement of a rock buttress at the base of the slope. In the meantime, the geotechnical engineer indicated that travelling below the slump or along the Pond 3 access road is not unsafe provided the slump and cracking remains relatively unchanged. Water Board staff and their contractor, TKT, will continue with normal work activities, including spring treatment in the Pond 3 area, while visually monitoring the slump and cracking along the Pond 3 access road. Water Board personnel are coordinating with AECOM for the preparation of a proposal to stabilize the slump as well as contacting the Department of General Services to determine available funding for the stabilization. See photos 4-6.

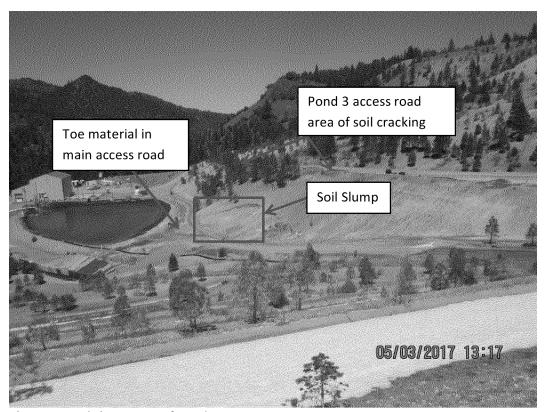


Photo 4 – Soil slump east of Pond 4

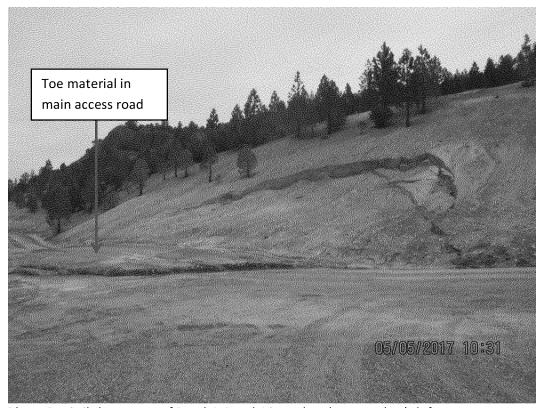


Photo 5 – Soil slump east of Pond 4, Pond 4 is to the photographer's left



Photo 5 – Soil cracking along the Pond 3 access road looking northwest, Pond 4 is downhill towards the photographer's left

The Water Board's contractor, TKT, intends to continue AMD neutralization in Pond 3 throughout the upcoming week. Precipitation is not forecast for the upcoming week. Water Board personnel will continue to visit the site throughout the upcoming week and prepare the next 2017 Spring Treatment summary on May 15, 2017.

	Estimated Discharge
Oute	Volume (gailens)
3/4/2017	380,000
3/10/2017	430,000
3/13/2017	326,000
3/16/2017	430,000
3/18/2017	467,000
3/20/2017	394,000
3/22/2017	429.000
3/24/2017	371,600
1/26/2017	399,000
3/28/2017	363,000
3/30/2017	394.000
4/1/2017	338,600
4/3/2017	359,0DC
4/5/2017	339,000
4/7/2617	428.000
4/9/2017	\$31,000
4/11/2017	392,000
9/13/2017	193,000
4/15/2017	470,000
4/17/2017	469.000
4/19/2017	483,690
9/21/2017	436,080
4/23/2017	427.000
4/25/2017	337,900
4/27/2017	422,090
4/29/2017	383,000
5/1/2017	376,600
5/3/2017	381.000
5/5/2017	353.000

Table 2 2017 Spring Treatment, Leviathan Mine Untreated Pond Water Sample Results

SAMPLE ID	Sample Description	SAMPLE DATE	рH	TEMP (°C)	Alumin	ım	Arsenio	:	Cadmic		Calciu	ım	Chron		Col			pper	tron	Lead		Magn	esium	Manga		Nick		Select		Sulf (as 5	(,02		Dissolved iolids	Zir
	y Maximum Discharge Cri		6.0 - 9.0		4		0.34	$\blacksquare$	0.009		NP		0.9		N			026	2	0.13		N		Ni		0.8		N		N			NP	0.2
USEPA 4-D	ay Average Discharge Crit	teria	NP	-	2	-	0.15	. +	9.004	0.1	N₽	.	0.3	1	N	P	0.	916 I D I	1	0.00	5	N	P D I	N:	2	0.09	4 D	0.0	35	N	P In I	$\vdash$	N9   D	0.2
			l		Result C	EQ 8	Result C	EQ :	Result	Q EQ	Result C	i Eq	Result	Q EQ	Result	Q EQ	Result	Q £Q	Result Q EC	Result	Q EQ	Result	Q FQ	Result	Q EQ	Result	Q EQ	Result	Q EQ	Result	Q EQ	Result	Q £Q	Result
00193001	Untreated water in Pond 3	2/24/2017	4.7	1.74	3.5 L		NO, 0.001		0.004		95.2		ND, 0.005		0.145	ŧ	0.086		0.30	ND, 0.001		21.1		0.869		0.832		0.002		362	D	513		0.10
00191002	Untreated water in Pond 1	2/24/2017	Ke	0.0%	ie a	1	0.188		0.004		90.4		0.675		0.22	D	0.127		16.3	ND, 0.001		1.6		1.24		0.577		0.001		587	D	789		0.13
QQ3P2SQQ4	Untreated water in Pond 2 South	3/7/2017	282	0.30	99.5		taba .	П	0.009		53.2	П	0.236		0.550		£ 140		365	ND, 0.001		12.5		2.99		147		0.002		1)40	D	1680		0.09
004P2S006	Untreated water in Pond 2 South	3/10/2017	24%	0.9	173		0.001	П	0.007		39.8	П	9.) 70		0.425	П	11.212	1000	HB, P	ND. 0.001		10.3		2.20		1.2		0.003		868	D	1240		11.62
006/25008	Untreated water in Pond 2 South	3/14/2017	264	0.0	185	Π,	0.256	П	2.007	П	36.8	П	0.180		0.417		0.227	DATE	25.8	ND. OLUGI		4.6	Т	2.18		i on		0.002		218	D	1110		0.20
008225010	Untreated water in Pond 2 South	3/17/2017	2.4	0.9	400 B	П	0.06	П	0.904	П	23.6	П	9.687		0.223		0.142	Section .	36.3	NO. 0.001		5.8		1.18		0.582		ND, 0.001		459	D	644		0.12
010P2S01Z	Untreated water in Pond 2 South	3/19/2017	7.50	0.0	30.9		0.035	П	0.003	П	17.6	П	0.664		0.171		6 118		195	ND, 0.001		4.4		0.877		0.442		0.002		342	D	459		0.06
012P2S014	Untreated water in Pond 2 South	3/21/2016	7.6	0.0	32.2		0.027		0.002		14.0		0.045		0.123		el ne s		17.5	ND, 0.001		3.1		0.649		0.318		ND, 0.001		245		351		0.96
013P2S016	Untreased water in Pena 2 South	3/22/2017	2.83	0.0	2500		9.072	П	0.003	П	15.4	П	9.658		0.145		8.160		15.9	ND, 0.001		3.5		9.821		0.388		ND, 9.001		286	D	395		0.98
014P2S018	Untreated water in Pond 2 South	3/24/2017	9113	0.0	2016		9.032	$\prod$	0.902	П	13.1	$\sqcap$	9.047		0.127		0,045		14	ND, 0.001		3.2		0.687		0.334		ND, 9.001		231		308		0.97
015925029	Untreated water in Pond 2 South	3/26/2017	237	0.0	50.5		0.059		0.003		18.7	П	0.059		0.152		9.40		25.4	NO. 0.001		4.0		0.830		0.414		NO, 0.001		323	D	438		0.98
016P2S022	tantrested water in Pond 2 South	3/28/2017	2.84	0.0	29.3		0.088		0.003		16.8	$\prod$	9.071		0.163		0.3.4		10.9	ND, 0.001		4.5		0.934		0.498		ND, 0.001		293	D	419		0.09
017P2S024	Untreated water in Pond 2 South	3/30/2017		0.3	48.1		NAME OF		0.964		30.3		0.113		0.259		A. 123	2000	., 9	ND. 0.001		7.7		1.53		0.677		ND, 9.001		569	D	778		0.14
017P20025	Untreated water in Pond 2 South, Dup/icate Sample	3/30/2017	7.32	0.0	-18-		i AA		0.904		25.9		9.119		9.262		0.184		194	NO. 9.001		7.3		150		0.706		ND, 0.001		367	D	780		0.14
018925027	Untreased water in Pond 2 South	4/1/2017	4.60	2.4			0.238	Ш	0.003		18.8	Ш	9.079		0.190		9.130		46 is	ND. OLUGI		5.1	$\perp$	1.03		0.505		ND, 0.001		377	D	523	Ш	0.10
019P2S029	Untreated water in Pond 2 South	4/3/2017	2.98	1.6	125		9.052	Ш	0.901		9.8	Ш	9.030		9.089		6.065	500000	15.4	ND, 0.001		2.1		0.410		9.19	Đ	ND, 9.001	Ш	146		279	Ш	0.94
020P2S032	Untreased water in Pend 2 South	4/5/2017		2.11	6.7		0.012	Ш	ND, 0.001	Ш	4.6	Ш	0.617	Ш	0.041	Ш	¢ (0)		781	ND, 0.001		1.1		0.213		0.109		ND, 0.001	Ш	89		216	Ш	0.02
021P2S033	Untreated water in Pond 2 South	4/7/2017	102	0.0	(5.1 L		0.046	Ш	0.001	Ш	8.7	Ш	0.033		0.081	Ш	200		38-5	ND, 0.001		2.4		0.473		0.207		ND, 0.001	Щ	173		298	Щ	0.95
022P2S035	Untreated water in Pond 2 South	4/9/2017	4.86	1.24	39,4° (		0.044	Ш	0.001	Ш	9.9	Ш	0.035		0.085	Ш	4.056		26 7	ND, 0.001	$\perp$	2.6	$\perp$	0.501		0.225		ND, 9.001	Ш	187	Ш	240	Ш	0.95
023P2S037	Umreased water in Pend 2 South	4/11/2017	a (t	4.04	10 3	,	0.008	Ш	0.001	Ш	7.1	Ш	0.023		0.064	Ш	0.000		11.0	NO. 0.001	$\perp$	1.8	$\perp$	0.378		0.164		NO, 0.001	Ш	124	Ш	194	Ш	0.04
024P25039	Untreated water in Pend 2 South	4/13/2017	7/%	0.00	361		9.061	Ш	0.002	Ш	14.5	Ш	9.644	Ш	0.129	Ш	0,563.1		19:	ND, 0.001	$\perp$	3.8	$\perp$	9.754		0.323		ND, 9.001	Ш	292	Ш	385	Ш	0.98
025P2S041	Untreated water in Pond 2 South	4/15/2017	2.01	2.49	ا 200		0.086		0.003	Ш	17.7	Ш	0.053		0.157		P,054		62.0	NO. 0.001		4.5		0.936		0.366		0.001	Ш.	352	D	460	Ш	0.09
026P2SG42	Untreated water in Pond 2 South	4/17/2017	3.18	6.45			0.242	11	0.00\$	Щ	26.6	$\perp \! \! \! \! \! \! \! \! \! \! \perp$	0.130	D	0.265	Ш	d 184		44.0	ND, 0.001	Щ	7.6	$\perp$	1.54		0.570	Щ	NO, 0.003	Щ	631	۵	863	Щ	0.13
027P2S044	Unitreated water in Pond 2 South Unitreated water in	4/19/2017	2,98	6.76	63.3		U 176	$\coprod$	0.006	Ш	37.6	$\coprod$	0.173	Ш	0.329	Ш	0.150		48	ND, 0.001 ND.	Щ	10.5	$\perp$	2.00		garan.	Ш	ND, 0.001	Ш	767	D	1070	Щ	0.20
028P2S047	Pond 2 South	4/21/2017	2:12	7.85	ine :		tiess.	Щ	0.009	Ш	45.2	Ш	0.212	Щ	0.372	Ш	0,238		252	ND, 0.001	$\perp$	13.5	$\perp$	2.33		1;10	$\perp$	0.001	Ш	1050	D	1400	Ш	0.74
029P2S049	Pand 2 South	4/23/2017	3.76	11.0	105		9780	i i	e enë	Ш	53.2	Ц	0.246	Щ	0.487	Ш	0.298		372	ND. 0.001	$\perp$	15.7	$\perp$	2.92		1.15	$\perp$	0.002	Щ	1250	D	1660	٥	4.0
30P2S0S2*	Untreased water in Pond 2 South	4/25/2017	2.75	7.23	Ш	Ш		4		Ш		$\perp \downarrow$		Щ		Ш	_	Ш			$\perp$	Ш	$\perp$				$\perp$		Ш	<u></u>	Щ	$ldsymbol{ldsymbol{ldsymbol{ldsymbol{eta}}}$	Щ	$\perp$
G1P2SOS4*	Untrested water in Pond 2 South	4/27/2017	234	10.53	$\sqcup \bot$	Щ		4		Щ		Ц		Щ	L	Ш	_	Щ	$\sqcup \sqcup$	$\sqcup$	Щ	Ш	$\perp$	$ldsymbol{ld}}}}}}$		$\Box$	Щ		Щ	<u> </u>	Щ	$oxed{oxed}$	Щ	$oldsymbol{ol}}}}}}}}}}}}}}}}}}}}}$
32P2SQ56+	Unirested water in Pond 2 South	4/29/2017	2,22	9.05	Ш	Ш		Ш		Ш		Ш		Ш		Ш	_	Ш		$\sqcup$	$\perp$	Ш	┸				Щ		Ш	L	Ш		Щ	ш
03391058*	Untreated water in Pond 1	5/1/2017		11.06		Ш		Ш		Ш		Ш		Ш		Ш		Ш			$\perp$	Ш	$\perp$				$\perp$		Ш	<u></u>	Ш		Ш	
03491.061*	Untreated water in Pand 1	5/3/2017		11.07		Ш		Ш		Ш		$\coprod$		Щ		Ш		Щ			$\perp$	Ш					$oxed{\Box}$		Щ		Щ		Щ	$oxed{\Box}$
B5P1063*	Untreated water in Pond 1	5/5/2017	289	13.92	Ш	Ш		11		Ш		$\perp \! \! \! \! \! \! \! \! \perp$		Щ		Ш	_	Ш	Ш		$\perp$	Ш	$\perp$				$\perp$		Щ	<u></u>	Ш		Щ	$\perp$
3691065*	Untreated water in Pond 1	5/7/2017		4.86				11	T			11			l -	1 1	1	11		1 1				l T				l .	$\Pi^{\gamma}$	1 7		1		1 7

Air values reported in mill grams are litter (regit) except pit which are in Standard Units and temperature which are in the units seed flee above. All parameters are disorded except Scientium which is total recoverable. All results are predicting NP— hot Protectioned NP— hot Protectioned NP— hot Protection and NP— hot Protection of NP— hot Protectio

Data Qualifier (IQI) from the Laboratory:

0 - Analyte reporting limit oriessed due to sample matrix

L. Lowest available: recording limit for the analytical method used

ND - Nor deviceded at the reporting limit, number following NO represents the requiring limit

ND - Nor deviceded at the reporting limit, number following NO represents the requiring limit

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ED\_001709\_00000271-00008

Table 3
2017 Spring Treatment, Leviathan Mine
Pond 3 Discharge Sample Results

SAMPLE ID	Sample Description	SAMPLE DATE	рH	TEMP (°C)	Alur	minum	Arse	réc	Cadro	ilum	Cald	ium	Chro	mium	Co	bait	Co	pper	ti	ron	tea	ıd	Magne	sium	Mang	anese	Nic	kel	Selen	ium	Sul (as:			Dissolved olids		Zinc
	y Maximum Discharge Cr		6.0 - 9.0			4	0.3		9.0		N		0.			₽		026		2	0.1		NE		N			84	N:		N			NP		0.21
USEPA 4-0	ay Average Discharge Cri	teria	NP	-	$\vdash$	2   D	0.1	5   D	9.0	04   D	N	P DT	0.	31   D	<del>-</del> '	101	0.	016   D	-	1 D	0.0	os To T	NF	DΙ	N	9	0.0	194   D	0.0	05   0	N	P D T	$\vdash$	NP D	₩,	0.21 D
					Result	Q EQ	Result	Q EC	Result	Q fc	Result	Q £Q		Q £Q	Result	Q £C	Result	Q £C	Result	Q £Q	Result	Q FQ	Result	Q FQ	Result	Q EQ	Result	Q £Q	Result	Q EQ	Result	Q EQ	Result	Q £Q	Result	it Q
0020/8003	Pond 3, Treated discharge	3/4/2017	7.64	0.0	3.16		ND, 0.031	Ш	0.002		84.3		ND, 0.005	Ш	0.068	Ш	0.043		0.11		0.002	Ш	19.5		0.471		0.163		0.003		262		361		0.05	:
0040/8005	Pond 3, Treated discharge	3/10/2017	8.30	0.0	0.19	Ш	0.002	Ш	ND, 0.003	Ш	362	Ш	ND, 0.005	Ш	0.015	Ш	NO, 0.005	Ш	0.12		ND, 0.001	Ш	20.2		0.263	Ш	0.651		0.008	Ш	1040	D	1500		0.01	L
0050/5007	Pond 3, Treated discharge	3/13/2017	7.83	0.0	0.24	Ш	0.002	Щ	ND, 0.001	Ш	231	Ш	ND, 9.005	Ш	0.029	Щ	0.008	Щ	0.04	Ш	ND, 0.001	Ш	8.4	$\perp$	0.291	Ш	0.083	Ш	0.004	Щ	617	D	866	Щ	0.90	
0070/5009	Pond 3, Treated discharge Pond 3, Treated	3/16/2017	7.67	0.9	6.13	Ш	9.001 ND.	Щ	ND, 0.901 ND,	Щ	362	Щ	ND, 9.005 ND,	Ш	0.045	Щ	ND, 0.005	Ш	ND. 0.02	Щ	ND. 0.001 ND.	Щ	12.2	$\perp$	0.724	Щ	9.110 ND.	Щ	0.003	Щ	979	D	1460	Щ	ND, 0.90	
0090/8011	discharge Pond 3, Treated	3/18/2017	8.55	0.0	3.35	Ш	9.001 9.001	Щ	0.001 ND,	Щ	209	Щ	9.005 ND.	Ш	0.005	Щ	ND, 0.005 ND.	Ш	ND. 0.02 ND.	Щ	NO. NO.	Щ	9.1	$\perp$	0.036	Щ	0.005	Ш	0.005	Щ	563	D	862	Щ	0.00 ND.	
0110/8013	discharge Pond 3, Treated	3/20/2017	8.64	0.0	0.44	Ш	9.001	Щ	0.001 ND.	Ш	157	Щ	9.005 ND.	Щ	9.008 ND.	Щ	0.905 ND.	Щ	0.02 ND.	Щ	0.001 ND.	Щ	7.5		0.251	Щ	9.042	Ш	9.004	Щ	409	D	623	Щ	ND, 0.01	
0130/8015	discharge	3/22/2017	8.80	0.0	28.0	Ш	0.001 NO	Ш	0.001 ND.	Ш	1.14	Ш	0.005 ND.	Ш	0.005 ND.	Ш	0.00s	Ш	0.02 ND.	Ш	NO. NO.	Ш	2.0		0.140	Ш	0.012 ND.	Ш	0.003	Ш	349	D	560		0.00 ND.	
014D/S017	discharge Pond 3, Treates	3/24/2017	8.52	0.0	3.24	Ш	0.001	Ш	0.001	Ш	126	Ш	0.005	Ш	0.005 ND.	Ш	6.005	Щ	0.02	Ш	0.001 ND,	Ш	5.7		0.072		0.005 ND,	Ш	0.003	Щ	288		479		0.01	
0150/8019	discharge Pond 3, Treated	3/26/2017	8.29	0.0	2.56	Ш	ND, 9.601	Щ	ND, 0.001 ND,	Ш	123	Щ	ND, 9.005 ND,	Ш	9.005	Ш	ND, 0.005	Ш	ND, 0.02	Ш	9.001 NO.	Ш	5.8	$\perp$	9.108	Ш	0.005	Ш	0.003	Щ	306	$\perp$	493	Ш	ND, 0.91 ND,	ι
016D/S021	discharge Pond 3, Treated	3/28/2017	8.38	1.4	6.52 ND.	Ш	ND, 0.001	Ш	0.001 ND,	Ш	129	Ш	9.005 ND,	Ш	0.005	Ш	ND, 0.005 ND,	Ш	ND. 0.02	Ш	9.001 NO.	Ш	6.2	$\perp$	0.183	Ш	9.014	Ш	0.002	Ш	304	$\perp$	487	Ш	0.91	i L
0170/5023	discharge Pond 3, Treated	3/30/2017	8.22	3.5	0.03	4	9.002	$\sqcup$	0.001 ND,	$\sqcup$	152	$\perp$	0.005 ND,	Ш	9.029	4	6.005 ND.	44	0.19 ND,	Н	NO. 0.001 ND,	Щ	7.6	$\perp$	0.466	Ш	0.052	$\sqcup$	0.002	Ш	406	D	602	$\perp$	ND, 0.01 ND.	L
018D/S026	discharge Pond 3. Treated	4/1/2017	8.44	2.07	0.09	Ш	0.001 ND.	Ш	0.001 ND.	Ш	163	Щ	9.005 ND.	Ш	0.019 N.D.	Ш	6.005 ND.	Щ	0.02 ND.	Ш	0.001 ND.	Ш	7.4	$\perp$	0.362	Ш	9.079	Ш	0.001	Ш	431	D	656	Ш	0.91 ND.	
019D/S028	discharge Pond 3, Treated	4/3/2017	8.71	6.35	1.01	4	0.001 ND.	$\sqcup$	0.001 ND,	Н	119	Щ	9.00S	Ш	0.005	4	6.00S NO,	4	0.02 ND,	Ш	0.001 ND,	Щ	5.1	$\perp$	0.110	Ш	0.020	$\sqcup$	0.002	Ш	314	4	491	oxdot	0.91 ND.	
020D/S020	discharge Pond 3, Treated	4/5/2017	8.20	5.95	6.10	Ш	0.001	Ш	0.001	Ш	104	Щ	0.005	Щ	0.011	Ш	0.005	Ш	0.02	Ш	0.001	Ш	5.6	4	0.198	Ш	0.031		0.003	Щ	304	4	463	Щ	0.01	
029 DID031	discharge, Duplicate Sample	4/5/2017	8.20	3.95	0.13		ND, 0.001		ND, 0.001		1.06		ND, 9.005		0.013		ND, 0.005		ND, 0.02		ND. OLUGI		5.6		0.201		0.030		0.003		307		437		ND, 0.93	
0210/5032	Pond 3, Treated discharge	4/7/2017	8.27	4.11	ND, 6.03	П	ND. 9.001	Ħ	ND, 0.001	П	ND, 0.5	т	ND, 9.005	П	0.023	Ħ	ND, 6.905	Ħ	0.18	П	NO. 0.001	П	ND. 0.5	T	0.356		0.057		9.003	Ħ	246		358	П	ND, 0.91	_
0220/5034	Pond 3, Treated discharge	4/9/2017	8.23	0.0	ND, 0.03	П	ND, 0.001	Ħ	ND, 0.001	П	86.0		ND, 0.005	П	0.030	П	ND, 0.005	П	0.04	П	ND, 0.001	П	7.0	T	0.419		0.675	П	9.002	П	232		309		ND, 0.01	_
023DiS036	Pond 3, Treated discharge	4/11/2017	8.40	4.76	0.66		ND, 0.001		ND, 0.001		103		ND, 0.005		0.018	П	ND, 6.005		0.64		ND, 0.001		8.0		0.428		0.071		ND, 0.001		270		378		ND, 0.01	
024D/S038	Pond 3, Treated discharge	4/13/2017	8.52	3.19	0.93		ND, 0.001		ND, 0.001		126		ND, 0.005		0.013		ND, 6.005		0.14		ND, 0.001		8.7		0.411		0.046		0.002		341		490		ND, 0.01	
025D/S040	Pond 3, Treated discharge	4/15/2017	8.00	3.96	ND, 6.03		위D, 0.001		ND, 0.001		148	П	ND, 0.005		0.033		ND, 0.005		0.45		ND, 0.001		9.1		0.666		0.092		0.003		420	D	585		ND, 0.01	
	Pond 3, Treated discharge, Duplicate				ND,		ND.		ND,				ND,				ND,				ND.														ND,	
6250ID042	Sample Pond 3, Treated	4/15/2017	8.00	3.96	0.03	Н	0.001 ND,	H	0.001 ND,	Н	146	Н	0.00S ND,	Н	0.032 ND,	Н	0.005 ND,	₩	0.44 ND,	Н	0.001 NO,	Н	8.9	+	0.656	Н	0.091	H	0.003	Н	417	D	580	Н	D.01 NO,	_
026DIS043	discharge Pond 3, Treater	4/17/2017	8.65	7.28	1.17	+	0.001	H	0.001	H	182	₩	0.005	Н	0.005	+	0.005	₩	0.02		0.001 ND,	H	8.4	+	0.242	H	0.613	H	0.002	₩	503	D	763	$\vdash$	0.01	$\top$
0270/5045	discharge Pond 3, Treated	4/19/2017	8.27	5.88	3.40	₩	0.027 ND,	H	0.001 ND,	Н	205	Н	9.009 ND,	Н	9.064	₩	6,934	₩	ND.		0.001 NO.	Н	13.2	+	0.935	Н	0.)84	Н	0.002	Н	573	D	826	Н	0.03 ND,	
028D/S046	discharge Pond 3, Treated	4/21/2017	8.52	8.05	0.14	+	0.001 ND,	$\vdash$	0.001 ND,	$\vdash$	256	$\vdash$	9.005 ND,	Н	9.033	+	6.908 ND,	+	0.02 ND.	$\vdash$	0.001 ND,	$\vdash$	15.5	+	0.870	$\vdash$	0.093	$\vdash$	0.002	$\vdash$	744	D	1000	$\vdash$	0.91 ND,	
029D:S048	discharge Pond 3, Treated	4/23/2017	8.27	10.91	0.63	+	0.001	$\vdash$	0.001	$\vdash$	346	$\vdash$	0.005	Н	0.007	+	0.005	+	0.02	+	0.001	$\vdash$	16.6	+	0.597	$\vdash$	0.028	+	0.002	$\vdash$	1020	D	1370	$\vdash$	0.01	+
030D\S050*	discharge Pond 3, Treated	4/25/2017	8.42	6.69		+	-	$\vdash$	1	+	$\vdash$	+	-	Н		+	$\vdash$	+	$\vdash$	Н		Н	$\vdash$	+	_	$\vdash$	-	$\vdash$	1	$\vdash$		+	$\vdash$	$\vdash$	+	+
030040051*	discharge, Duplicate Sample	4/25/2017	8.42	6.69	L	Ш	L	Ш		Ш	L			Ш	L	Ш		Ш	L	Ш		Ш					L	Ш		Ш			L	Ш	L	
0310/6053*	Pond 3, Treated discharge	4/27/2017	8.54	8.28		П								П				П				П													I	Ι
0320%0SS*	Pond 3, Treated discharge	4/29/2017	8.45	8.02																															oxdot	Ι
0330/8057*	Pond 3, Treated discharge	5/1/2017	8.77	9.77																																Ι
0440′5059*	Pond 3, Treated discharge	5/3/2017	8.70	12.56														Ш						I											$oxed{\mathbb{L}}$	Ι
	Pond S, Treated discharge, Duplicate																																			T
034010060*	Sample Pond 3, Treated	5/3/2017	8.70	12.56	H	+	$\vdash$	$\vdash$	$\vdash$	H	┢	+	┢	Н	$\vdash$	+	$\vdash$	+	$\vdash$	Н	$\vdash$	Н	$\vdash$	+	$\vdash$	Н	┢	+	-	+		+	$\vdash$	$\vdash$	+	+
0350/5062*	discharge Pond 3, Treated	5/5/2017	8.81	13.78	$\vdash$	+	$\vdash$	₩	$\vdash$	+	$\vdash$	+	$\vdash$	Н	$\vdash$	₩	+	₩	+	Н	$\vdash$	+	$\vdash$	+	$\vdash$	$\vdash$	$\vdash$	+	$\vdash$	Н		+	$\vdash$	$\vdash$	+	+
D36D/SD64*	chscharge	5/7/2017	8.82	4.23	ı	1 [	1	1	1	1 [	1	1 1	ı	I I	1	1 1	1	1 1	1	1 1	l	1 1	ı		I		1	1 1	1	l I	ĺ		ı	Ιİ	1	

All values reported a miligram sperified Implijesteptpt which are in Standard Units and temperature which are in the units specified stove. All parameters are divolved a seed stelenium which is total incorrelative. All results are positionally in the following stelenium of the control of the seed stelenium which is total incorrelative. We not because of the seed stelenium 
Data Qualifies (IOQ) from the Laboratory:

D - Analytic reporting that in croased due to sample matrix

L: Lowest analytic proofing limit for beauty licit method used

ND - Not devicted at the reporting limit, number following ND represents the reporting limit.

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Table 4
2017 Spring Treatment, Leviathan Mine
Manual Remaining Freeboard Measurements

		Remaining Freeboard		Approximate Combined Adit and
Date	Pond	(ft)	Precipitation	PUD flow (gpm)
3/9/2017	Pond 2 South	0.29		
3/20/2017	Pond 2 South	0.35		
3/22/2017	Pond 2 South	0.28		
3/23/2017	Pond 2 South	0.30		
3/27/2017	Pond 2 South	0.32		
3/28/2017	Pond 2 South	0.40		
3/29/2017	Pond 2 South	0.42		
3/30/2017	Pond 2 South	0.40	Yes	80
4/3/2017	Pond 2 South	0.35	No	85
4/4/2017	Pond 2 South	0.36	No	85
4/5/2017	Pond 2 South	0.35	No	94
4/6/2017	Pond 2 South	0.35	No	100
4/7/2017	Pond 2 South	0.14	Yes	107
4/9/2017	Pond 2 South	0.0	No	107
4/10/2017	Pond 2 South	0.0	No	107
4/11/2017	Pond 2 South	0.0	No	106
4/12/2017	Pond 2 South	0.0	No	106
4/13/2017	Pond 2 South	0.0	Yes	112
4/14/2017	Pond 2 South	0.0	No	106
4/17/2017	Pond 2 South	0.0	Yes	110
4/18/2017	Pond 2 South	0.0	Yes	117
4/19/2017	Pond 2 South	0.0	No	121
4/20/2017	Pond 2 South	0.0	No	117
4/21/2017	Pond 2 South	0.0	No	121
4/24/2017	Pond 2 South	0.0	No	121
4/25/2017	Pond 2 South	0.0	No	126
4/26/2017	Pond 2 South	0.0	No	126
4/27/2017	Pond 2 South	0.0	No	126
4/28/2017	Pond 2 South	0.0	No	126
5/1/2017	Pond 2 South	0.0	No	126
5/2/2017	Pond 2 South	0.0	No	126
5/3/2017	Pond 2 South	0.0	No	121
5/4/2017	Pond 2 South	0.0	No	117
5/5/2017	Pond 2 South	0.0	No	117
5/8/2017	Pond 2 South	0.0	No	117

